ENERGY STAR® for Telephony Industry Meeting
July 23rd, 2001

List of Attendees

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Meeting Minutes

Overview of ENERGY STAR: Craig Hershberg, EPA
See presentation for additional detail (Slides 3 – 9)

- The goal of ENERGY STAR, a voluntary public-private partnership, is to expand the market for energy-efficient products.
- Products bearing the ENERGY STAR label are more efficient than their counterparts in the market.
- ENERGY STAR is market-based and technology-neutral.
- Products with the ENERGY STAR label must perform as well, if not better than, their counterparts without the label.
- To support its partners, ENERGY STAR offers many benefits, such as marketing templates and Web site links from the ENERGY STAR Web site.
- ENERGY STAR is designed to change the consumer's mind-set and empower him/her to actively seek out ENERGY STAR labeled products.
- ENERGY STAR evolved from the first President Bush's Green Lights program in 1993, and now includes more than 30 product categories.
- In addition to manufacturers, ENERGY STAR partners include retailers and utilities who promote the purchase and use of ENERGY STAR labeled products to their customers.

Question Asked: Could utility companies give rebates for ENERGY STAR labeled telephony? Are utilities offering rebates for other consumer electronics products?

- Yes, there are rebates being offered through the utilities, particularly for major appliances, HVAC and windows. ENERGY STAR will do some research on rebate offerings for consumer electronics and share its finding with meeting attendees.
- ENERGY STAR successfully differentiates products in the marketplace and makes it easy for partners to use energy-efficiency as a key selling point.

ENERGY STAR Marketing: Wendy Reed, EPA
See presentation for additional detail (Slides 10 - 20)

- The current awareness of ENERGY STAR, nationwide, is at an all-time high of 41 percent.
- With increasing awareness of ENERGY STAR and concern over energy issues, ENERGY STAR considers this the right time to launch its "Change Campaign."
- The campaign will hit the three major media vehicles – print, television and radio and will launch nationally in October 2001.
- Under the campaign, ENERGY STAR wishes to make a head/heart connection for the consumer. Energy efficiency is no longer only about dollars and cents – it is now a life-style choice.
- A campaign goal is to have regional/local messaging that feeds into the national campaign.
- An important reason driving the new campaign is that partners want increased advertising of their relationship with ENERGY STAR. ENERGY STAR will provide advertising templates that manufacturers can customize.
- ENERGY STAR is producing a video to introduce partners to the new campaign.
- There are three ENERGY STAR logos available for use by partners – the certification, partnership, and promotional marks. The Logo Use Guidelines describe these marks and how to use them correctly on products and in promotional materials.

Upcoming ENERGY STAR Events

- CEA and ENERGY STAR are sponsoring an energy-efficiency pavilion at the Consumer Electronics Show in January 2002, large enough for 30-40 booths.
- These booths will feature energy-efficiency products, including ENERGY STAR.

ENERGY STAR As An International Program

- ENERGY STAR is international, and is being actively promoted in many countries including Japan, Europe, Australia and now Canada.
- The ENERGY STAR specifications for each country are the same, so that manufacturers do not need to alter designs when selling products in multiple countries.
- On July 19, EPA Administrator Christie Whitman joined David Garman, Assistant Secretary of the Department of Energy and Neil MacLeod, Director General of Natural Resources Canada to sign an agreement between the agencies to bring ENERGY STAR to Canada. This agreement covers many ENERGY STAR labeled products including office equipment, consumer electronics, home appliances, and heating and cooling equipment.

ENERGY STAR for Telephony: Julio Rovi, The Cadmus Group/Craig Hershberg, EPA
See presentation for additional detail (Slides 11 - 43)

<u>Why Telephony?</u> (Slides 11- 26)

- There is a rapidly growing market for telephony products.

- Telephony is also a very competitive market, where price plays a significant factor in consumer decisions.
- Although annual energy savings per phone are small, there is potential for an overall savings of large proportions (1.5 TWh if all 62 million telephony products projected to be sold in 2000 met the proposed specification of .5 watts during standby). Significant energy savings can be achieved as the devices are only used for a small portion of time, yet remain plugged in and on standby all the time.
- The telephony companies have pledged to do their share for the environment. CEEI is very interested to see what they can do through partnering with ENERGY STAR.
- Telephony products included under the specification are cordless phones, answering machines and combination units.

How did ENERGY STAR arrive at a .5 watt specification? (Slides 27 – 43)

- The European Commission has already targeted wall-packs to increase efficiency. Phase I of the European Commission's standard is .5 watts, Phase II is .375, and Phase III is .30 watts.
- Products are self-certified by manufacturers using their labs or in-house facilities.
- To increase efficiencies, some technology transfer is necessary from cell phones. The efficiency of this product category was groundbreaking for telephony as a whole.
- The current .5 watt specification was reached by estimated the energy needs for delivering energy to a display, memory settings and signal detection.
- ENERGY STAR wishes to address average time power in standby mode. The way the specification is currently written, as long as the phone uses an **average** of .5 watts of energy an hour (12 watts a day), qualifies as ENERGY STAR.
- One opportunity to increase efficiency is by altering the power supply from linear to switch mode. ENERGY STAR found that by using a more efficient power supply the energy consumption could be cut by 1-2 watts.
- Other options for improving energy performance focus on battery chargers and circuit design.
- ENERGY STAR shared its metering procedure and results for 21 telephony products purchased in the Washington DC area at $100 or under (see attached table).

Manufacturer and Industry Concerns/Comments

- Simple circuitry redesign will not alter things very much; in fact, it might make phones more inefficient as the handset battery will be used to power features that the charger previously powered.
- A TV/VCR is a 1-way communications channel – remote to receiver. Standby is easily managed in this type of communications channel. But, the handset to base is a 2-way communications channel – it is more complicated to adjust the standby power.
- Is the 24-hour metering period to include charging? If so, how many minutes of use should be taken into account for that period? ENERGY STAR: The industry needs to come to an agreement about this. We can have a 24-hour cycle, or a 3-hour cycle, or another time period. The key issue is to determine a representative timeframe that takes into account any significant power fluctuations.
- CES is not the best venue for telephony. Supercom is where the manufacturers showcase their new products. The next show is in Atlanta in June 2002.
- Realistically, how can existing phones be redesigned to meet the proposed specification by January 2002? ENERGY STAR agreed that this is an aggressive timeframe for an aggressive specification and agreed to consider alternatives.

- SMPS results provided by ENERGY STAR were tested on one phone and then replicated for the other products. They represent estimates. Some participants questioned the accuracy of this approach.
- The most obvious power losses while testing came from power supplies. ENERGY STAR mentioned that SMPSs provide better power quality and cleaner voltage. Manufacturers responded SMPS does not provide a "cleaner voltage." It does supply a well-regulated voltage, but it puts out a high-frequency hash.
- The phones must be UL listed. There will be some design work needed to comply with UL 1950.
- There may be some regulatory issues because of the hash. It must meet FCC standards and doesn't come free. We also need to make sure that it meets UL safety compliance. Also, we have to worry about hearing aids. If the disabled cannot use these phones, it is going to be a big problem. Basically, by improving the product in one area, we may cause a problem somewhere else.
- The only redesign idea that ENERGY STAR has given is power supplies; however, ENERGY STAR says that it is technology neutral.
- ENERGY STAR should take out the "90 minutes" language in the testing portion of the specification; it's probably not appropriate. We need to make the specification more general, more universal for all phones.
- Switching supplies are still priced 50 percent higher than linear supplies. For a $20 phone, which is a large part of market sales, we can't afford to spend more for the supplies. The $20 phones outsell the $100 units by five to one. Competition is such that we can afford to spend a penny more on the technology for some phones. We would use the switch mode power supplies if they were available cost competitively. We are going to have to pass the design costs to the consumer, unless we have a longer redesign phase.
- One manufacturer expressed concern that the minimal per unit savings could have a negative connotation. He questioned whether putting the ENERGY STAR label on these products would increase sales.
- Another manufacturer asked if ENERGY STAR tested models with multiple hand sets. ENERGY STAR explained that it had not due to their small marketshare. However, ENERGY STAR said it would be wiling to test them if manufacturers thought this would be a growing product.
- EIA provided some written comments. One key concern is combination products. In other specifications, there has been the recognition that combination products need to use more power. Has ENERGY STAR thought of changing this? ENERGY STAR has looked at combination units and some of them are more efficient than stand alone phones. If you can provide some data, we will consider re-evaluating combination units.
- One manufacturer pointed out that there are no models that currently qualify under the .5-watt specification and that there probably won't be anything within the next 6 months. He also let ENERGY STAR know that his company would have difficulty meeting the specification even if they changed the power supply. Also, the manufacturer noted that there were no products on ENERGY STAR's metering list that used a switch mode power supply. The manufacturer voiced his concern that telephony could be similar to set-top boxes in that there will be no products to promote the product area at the launch. Also, he felt that ENERGY STAR has assumed that manufacturers would catch up to the specifications, but highlighted that this hasn't been the case in the past. ENERGY STAR replied that a tiered specification is usually used in these instances and that a second draft of the specification should be discussed. This second draft specification should address what is being sold on the market as well as new products expected to be released in six months. ENERGY STAR also noted that there will be products available 18 to 24 months down the road and that there may be products in development that are six months away.

How to Join ENERGY STAR for Telephony
See presentation for details (Slides 44-49)

Presentation by Cliff Walker, Power Integrations (component manufacturer for switch mode power supplies)

- See presentation for details.

Next Steps

1. Industry to provide suggested specifications in two weeks (August 6, 2001).
2. ENERGY STAR to provide manufacturers with their specific product test data.
3. ENERGY STAR to provide list of rebates. ENERGY STAR OPIE has a listing of utilities offering rebates on its Web site, go to http://www.energystar.gov/opie/partnerinformation/utilities/activities.asp. ENERGY STAR will provide other rebate information, as appropriate.
4. ENERGY STAR to revise and distribute second draft of the specification to industry for comment.